

## Patent claims:

1. A process for the depolymerization of hot water-coagulable cellulose ethers by hydrolytic degradation by means of acids, characterized in that the degradation  
5 is carried out at a temperature above the cloud point of the cellulose ether as concentrated aqueous slurry, and in that in addition oxidizing agents are added to the concentrated aqueous slurry, before, during and/or after the depolymerization in acidic or neutral medium.
- 10 2. The process as claimed in claim 1, characterized in that methyl-, ethyl-, propyl-, hydroxyethylmethyl-, hydroxypropylmethyl-, ethylhydroxyethyl- or ethylmethylcellulose is employed as cellulose ether.
- 15 3. The process as claimed in claim 1 or 2, characterized in that the degraded cellulose ether has a Höppler viscosity, measured as 2.0% solution (absolutely dry) in water at 20°C, of  $\leq 50$  mPas.
4. The process as claimed in at least one of the preceding claims, characterized in that mineral acids and/or organic acids are employed as acids.  
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5. The process as claimed in claim 4, characterized in that hydrochloric, sulfuric, nitric and/or phosphoric acids are employed as mineral acids.
6. The process as claimed in at least one of the preceding claims,  
25 characterized in that the ratio of water to cellulose ether does not exceed 10:1 by weight.
7. The process as claimed in at least one of the preceding claims, characterized in that peroxo compounds, perborates, sodium chlorite, halogens  
30 and/or halogen oxides are employed as oxidizing agents.
8. The process as claimed in claim 7, characterized in that hydrogen peroxide is employed as oxidizing agent.

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9. The process as claimed in at least one of the preceding claims, characterized in that the oxidizing agent is employed in an amount of from 0.01 to 20% by weight based on the cellulose ether.
- 5 10. The process as claimed in at least one of the preceding claims, characterized in that, after the depolymerization, the degraded cellulose ether is washed with at least one aqueous solution of a basic salt at a temperature above the cloud point of the degraded cellulose ether in order to adjust the aqueous solution of the degraded cellulose ether to a pH in the range from 5.5 to 8.0.
- 10 11. The process as claimed in claim 10, characterized in that sodium carbonate, sodium bicarbonate, sodium sulfate and/or sodium bisulfate is employed as salt.
- 15 12. A methylhydroxypropylcellulose with a Höppler viscosity, measured as 2.0% solution (absolutely dry) in water at 20°C of  $\leq 50$  mPas, obtainable by a process as claimed in at least one of the preceding claims.
- 20 13. A methylhydroxypropylcellulose with a Höppler viscosity, measured as 2.0% solution (absolutely dry) in water at 20°C, of  $\leq 50$  mPas, characterized in that it has a whiteness, determined by measuring the reflectance in % at 447 nm against a white standard (enamel white standard; reflectance setting = 71.5%), which is above 50%, with a particle size distribution in which the proportion of particles with a size of  $< 125 \mu\text{m}$  does not exceed 50%.
- 25 14. A methylhydroxypropylcellulose as claimed in claim 13, with a Höppler viscosity of from 5 to 50 mPas, characterized in that the whiteness, determined by measuring the reflectance in % at 447 nm against a white standard (enamel white standard; reflectance setting = 71.5%), is above 60%.
- 30 15. A methylhydroxypropylcellulose as claimed in claim 13 or 14, characterized in that it has a salt content of less than 0.4% by weight.

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16. A methylhydroxypropylcellulose as claimed in at least one of Claims 13 to 15, characterized in that it has a content of methoxy groups in the range from 28 to 32% by weight and a content of hydroxypropyl groups in the range from 5 to 9% by weight.

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17. The use of the methylhydroxypropylcelluloses as claimed in at least one of claims 13 to 16 for coating pharmaceuticals or seeds and for use in cosmetics, foodstuffs or in suspension polymerization.

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